

DIRECT CURRENT

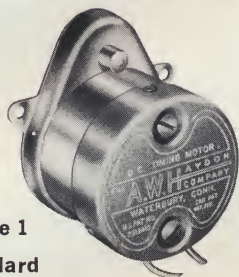


Figure 1
Standard

- 5300 SERIES** — Basic Type.
- Voltages from 4½ to 45 VDC.
 - Speeds from 2700 to 1/120 R.P.M.
- 6300 SERIES** — Low Current Type.
- Available from 6 to 60 VDC
 - Operating Current: 5-10 MA.
- 7600 SERIES** — ROTO TORK.®
- Rotary Actuators.
 - Stall or rotary torque applications.
- Write for BULLETIN AWH MM-805*

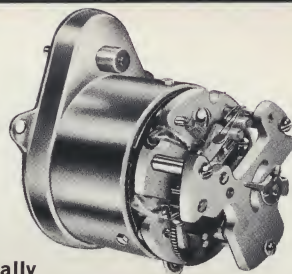


Figure 2
Chronometrically Governed

- $\pm 0.1\%$ over $\pm 20\%$ Rated Voltage.
- 5600 SERIES** — Aircraft and military
- For high temperature; moderate vibration and shock.
- Write for BULLETIN AWH MM-801*
- 5800 SERIES** — Aircraft and Missile
- For high temperature, vibration and shock.
- Write for BULLETIN AWH MM-802*

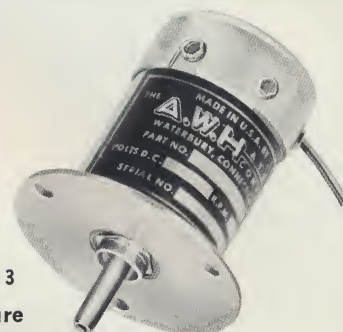


Figure 3
Miniature

- 14100 SERIES** — Vanguard Motor.
- Similar to basic 5300 Series.
 - Wide range of voltages.
 - Optional mounting.
 - Drive recorders, timing devices, etc.
 - Only 15/16 O.D. — 1½ long.
- Write for BULLETIN AWH MM-809*
- Other Miniature D.C. Motors; Tachometer Generators; Stepping Motors; Special D.C. drives can be supplied.

PRECISION TIMING MOTORS



Figure 4
Standard

- 25, 50, 60 CPS Synchronous.
 - 2½ Watts maximum. Compact ⅞" Deep.
 - Electrical Control of rotation.
 - Quiet—no one-way gears or ratchets.
 - Speeds from 300 RPM to 1 RPD.
- 22100 SERIES** — Military Applications.
- Write for BULLETIN AWH MM-806*
- 42100 SERIES** — Industrial Applications.
- Write for BULLETIN AWH CM-801*



Figure 5
Reversible

- Lightweight — Reliable.
 - SPDT reversibility.
- 24100 SERIES** — 400 CPS Synchronous.
- Military Applications.
 - Speeds from 3000 to 1/36 RPM.
- Write for BULLETIN AWH MM-803*
- 26100 SERIES** — 60 CPS Synchronous.
- Military & Industrial Applications.
 - Speeds from 450 to 1/240 RPM.
- Write for BULLETIN AWH MM-807*

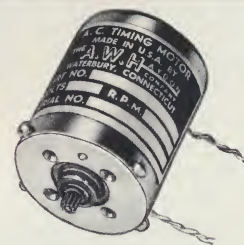


Figure 6
Miniature

- 25100 SERIES** — 400 CPS Synchronous.
- Similar to reversible 24100 series.
 - Meets Military specifications.
 - 3 Watts Maximum.
 - Drive Counters, Timing Devices, etc.
 - Reversible or Unidirectional.
 - Only 15/16 O.D. — 1-7/32 Long.
- Write for BULLETIN AWH MM-808*
- Other miniature A.C. motors; A.C./D.C., odd frequency, Special A.C. drives can be supplied.

ALTERNATING CURRENT

NEW STEPPING DEVICES



Figure 7

Pulse Counters

- Predetermined or driven pulse counters provide visual count reference.
- Knurled setting wheel allows rapid setting to desired count required, or to zero after count has been made.
- High pulse rate response.
- Electrical zero reference within unit.

- D.C. pulse control system features versatility, high response rate, precision control.
- Low power consumption permits positive, remote operation.
- Many other functions can be offered:
 - Rotary Stepping Switches
 - Precision Gated Pulse Dividers
 - Precision Sequencing
 - Pulse Memory Storage
 - Remotely Settable Interval Timer

*Write for TECHNICAL BROCHURE SP9-1
BULLETINS AWH MM-810, CM-802*

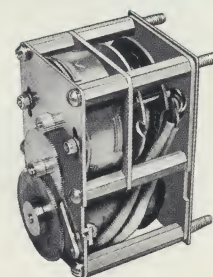


Figure 8

Remote Positioning Devices

- Remote pulse positioning of synchros, rotary switches, and indicating devices.
- High accuracy angular reference.
- Positive response to input pulse.
- Electrical zero reference within unit.
- Auxiliary switching to meet specific requirements.

ELAPSED TIME INDICATORS

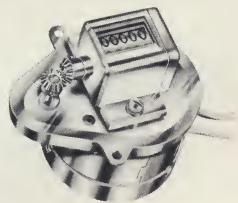


Figure 9

Basic Type

- Compact — light weight.
- Counters register Hours, Minutes, Seconds or tenths.

7500 SERIES — Direct Current.

12500 SERIES — 60 CPS AC.

24200 SERIES — 400 CPS AC.

Write for BULLETIN AWH MI-600

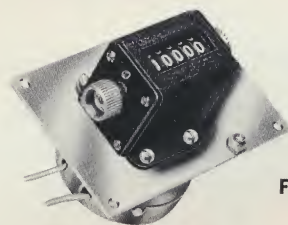


Figure 10

Reset Type

- Panel mounting plate.
- Counters register same as basic type.
- Series same as basic type.
- Reset knob on left side of counter allows convenient reset to zero.

Write for BULLETIN AWH MI-601



Figure 11

Sub-Miniature Type

- Dial and digital models.
- Dia. only 1¼ — Weight under 4¾ oz.
- Meets Military specifications.

25200 SERIES — 400 CPS AC.

Write for BULLETIN AWH MI-602

23200 SERIES — 60 CPS AC.

Write for BULLETIN AWH MI-603

TIME INDICATING INSTRUMENTS

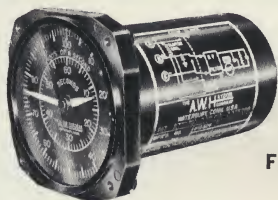


Figure 12

Dial Face

- Meets Military specifications.
- Read Seconds or Minutes.
- Electrical reset — precision movement.
- Optional Mounting and electrical termination.

15200 SERIES — 400 CPS AC.

Write for BULLETIN AWH MI-701

15300 SERIES — Direct Current.

Write for BULLETIN AWH MI-700



Figure 13

Digital

- Meets Military specifications.
- Rapid Electrical Reset.

15100 SERIES — 60 CPS AC.

15200 SERIES — 400 CPS AC.

Write for BULLETIN AWH MI-704

15300 SERIES — Direct Current.

Write for BULLETIN AWH MI-703



Figure 14

Laboratory

- Clutchless timing — electrical reset.
- Standard and Deluxe Models.
- Calibrated 10 MS increments.
- 115 Volt, 60 CPS operation.
- Auxiliary cables available.
- Local or remote control.

15100 SERIES — 60 CPS AC.

Write for literature

STOP CLOCKS

NEW BINARY ENCODERS

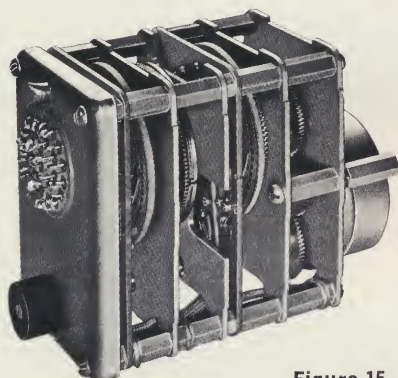


Figure 15

- Hermetic type — Adjustable.
- Codes Seconds to 60 Minutes.
- Decimal-Binary output code.
- Rapid transfer eliminates ambiguity.
- Read circuit assures positive coding.
- Optional range and calibration.

- Time code generators.
- Analog to digital conversion.
- Binary to decimal conversion.
- Coding from seconds to weeks.
- Wide range of codes possible.
- A.C., D.C. or pulse drives.
- Master and slave clock systems.
- Military and commercial applications.
- Sealed, enclosed and open models.
- Manual or electrical adjustability.
- Digital or clock face readout.

Write for LITERATURE on STANDARD ENCODERS or TECHNICAL BROCHURE on Custom Design Capabilities



Figure 16

- Open type — Adjustable.
- Codes minutes to 28 days.
- SPDT code switching.
- High speed indexing motor for rapid transfer.
- Designed for high volume commercial use.
- Used for computing time/rate charges.

TIME DELAY RELAYS

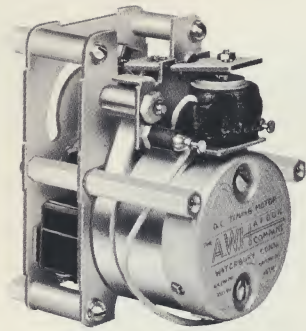


Figure 17

Basic Type

- Dust cover enclosure.
 - Preset or adjustable time delay.
 - 6 Standard 6:1 ranges.
 - Incorporates up to 6 switches.
- 6400 **SERIES** — Direct Current.
11400 **SERIES** — 60 CPS AC.
24300 **SERIES** — 400 CPS AC.

Write for BULLETIN AWH MD-403

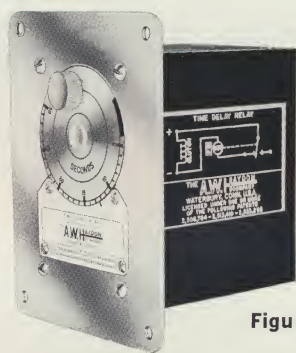


Figure 18

Dial Adjustable Type

- Dust cover enclosure.
 - Flush or surface mounting.
 - 6 Standard 6:1 ranges.
 - Positive twist-lock setting.
 - Available D.C., 60 or 400 CPS.
- Series same as basic type.

Write for BULLETIN AWH MD-403

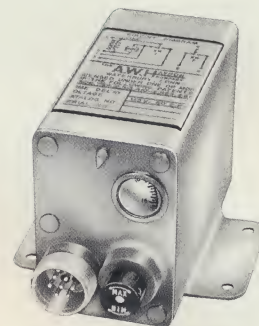


Figure 19

Hermetic-Adjustable

- True hermetic sealing.
 - Adjustable over 10:1 range.
 - Several ranges available.
 - Calibrated dial in window.
 - Meets Military Specifications.
- Series same as basic type.

Write for BULLETIN AWH MD-401



Figure 20

Miniature-Round Hermetic

- Up to 7 switches standard.
- Factory set timing program.
- 2½" Diameter housing.
- Optional mounting and electrical termination.

Series same as Basic Type.

Write for BULLETIN AWH MD-400

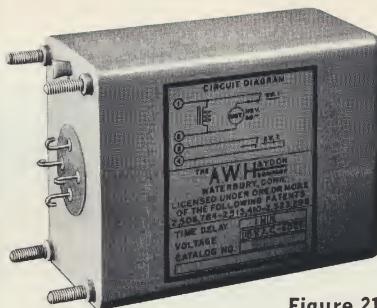


Figure 21

Basic Hermetic Type

- Rectangular hermetic enclosure.
- Sealed Basic Type units.
- Up to 6 switches standard.
- Factory set timing program.

Series same as basic type.

Write for BULLETIN AWH MD-406

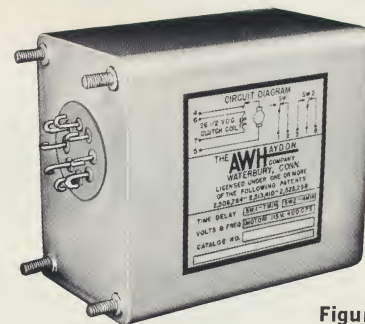


Figure 22

Proportional Delayed Reset

- Dust cover or hermetic enclosure.
- Standard operation on time delay.
- Escapement controlled reset rate.
- Several reset rates available.

Series same as basic type.

Write for BULLETIN AWH MD-402

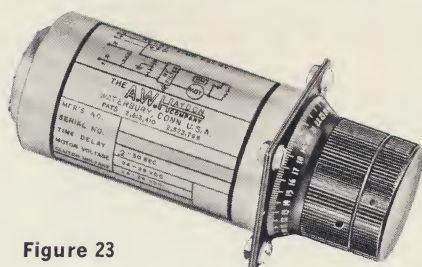


Figure 23

Special-Adjustable

- Dust tight enclosure.
- Precision adjustable over wide range.
- Accuracy: ± 0.1 second or $\pm 1\%$ of setting.
- Several ranges available.
- Meets Military specifications.

Write for BULLETIN AWH MD-500

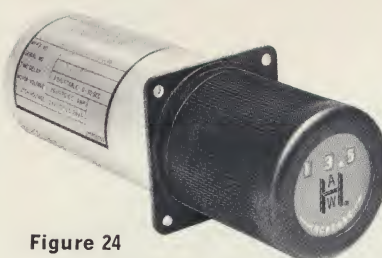


Figure 24

Special-Digital Adjustable

- Dust tight enclosure.
- Precision adjustable over wide range.
- Accuracy: ± 0.1 second or $\pm 1\%$ of setting.
- Knob turns, window fixed.
- Meets Military specifications.

Write for BULLETIN AWH MD-501

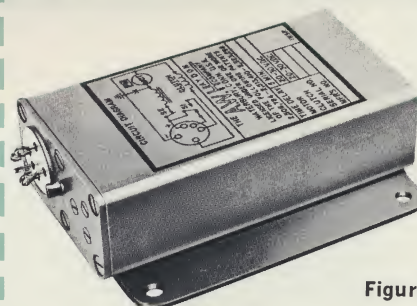


Figure 25

Sub-Miniature Hermetic

- 1" x 2" cross section.
 - Basic weight 7½ ounces.
 - Up to 3 switches standard.
- 4300 **SERIES** — Direct current.
25300 **SERIES** — 400 CPS AC.

Write for BULLETIN AWH MD-502

MILITARY — INDUSTRIAL — COMMERCIAL

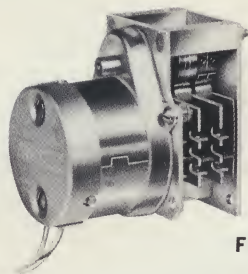


Figure 26

Basic Type

- Up to 11 switches standard.
- Fixed or adjustable programs.
- Solder terminals on switches.

3600 SERIES — Direct Current.

13600 SERIES — 60 CPS AC.

24400 SERIES — 400 CPS AC.

Write for BULLETINS AWH MC-201,
MC-203, MC-204

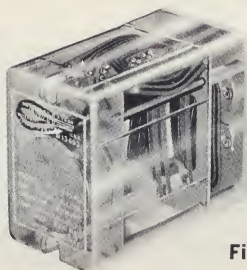


Figure 27

Industrial-Long Life Type

- Transparent dust cover.
- Silent operation.
- 115 Volt, 60 CPS or special.
- Designed for high volume use.
- Basic unit has 12 circuits.
- Low cost in high volume production.

Write for literature



Figure 28

Commercial Programmer

- Quick-connect terminals standard.
- Up to 8 switches standard.
- Factory set programming.
- 3" Square, 1 3/4" long (1-4 switches).
- 4 Stud and corner notch mounting.

41900 SERIES — 60 CPS AC.

Write for BULLETIN AWH CC-202

REPEAT CYCLE TIMERS

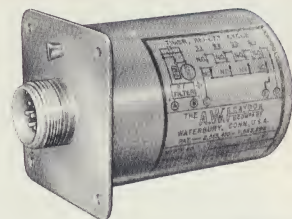


Figure 29

Miniature-Round Hermetic

- Up to 10 switches standard.
- Factory set time sequence.
- 2 1/2" Diameter housing.
- Optional mounting and electrical termination.

Series same as basic type.

Write for BULLETIN AWH MC-200



Figure 30

Precision Interval Timer

- True Hermetic Sealing.
- Calibrated dials behind window.
- Wide range of adjustment.
- Flush panel mounting.
- Automatic motor shut-off.

Write for literature



Figure 31

Sub-Miniature Hermetic

- 1 x 2 Cross section.
- Basic weight 6 1/2 ounces.
- Up to 8 switches standard.

4400 SERIES — Direct Current.

25400 SERIES — 400 CPS AC.

Write for BULLETIN AWH MC-301

HERMETICALLY SEALED

ELECTRONIC PRODUCTS

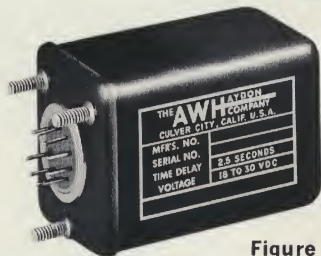


Figure 32

Miniature Electronic Time Delay Relays

- 50 MS to 20 Minutes standard.
- Pre-set delay or adjustable.
- Up to 4 PDT, 8 Amp. loads.
- Accuracy to 2 1/2%.
- 1-7/16 x 1-21/32 cross section.

Write for BULLETIN

Transistorized Devices

- Time Delay Relays.
- Repeat Cycle Timers.
- Voltage, Current and Frequency sensors.
- Self-contained timers.
- Solid state switching.
- Miniature and sub-miniature types.

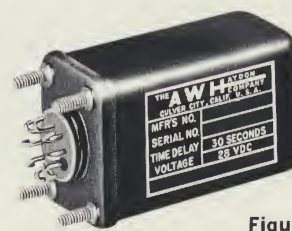


Figure 33

Sub-Miniature Electronic Time Delay Relays

- 50 MS to 20 Minutes standard.
- Pre-set delay or adjustable.
- Up to DPDT, 8 Amp. loads.
- Accuracy to 2 1/2%.
- 31/32 x 1-3/16 Cross section.

Write for BULLETIN



The
A.W. HAYDON
COMPANY
232 NORTH ELM STREET
WATERBURY 20, CONNECTICUT



AIRBORNE TIME CODE GENERATOR SYSTEM Model 3548

The Time Code Generator 3548-3 generates a serial BCD Time-of-Day code in standard IRIG B format, a buffered parallel BCD Time-of-Day output and 3 synchronous pulse trains. A 1PPS pulse train is standard; two others may be selected from options ranging from 10PPS to 100K PPS in multiples of 10. The IRIG B format is generated in both DC level shift and modulated carrier forms. Basic timing stability is 1 part in 10^5 (1 part in 10^6 optional) over a temperature range of -35°C to $+71^{\circ}\text{C}$.

The system operates from 28VDC power per MIL-STD-704. Physical dimensions are 5 x 5 x 10 inches excluding mounting flange. Weight is 10 pounds maximum.

Several optional accessories are available:

Pictured are a Remote Control Unit, 3548-7, for initially setting in Time-of-Day and performing miscellaneous control functions; and a Display Unit, 3548-5, for displaying Time-of-Day.

A battery pack is available for operating the generator for one-half hour while transporting from laboratory to aircraft.

Other accessories are elapsed time counters, slave displays, relay and solenoid drivers, etc.

The system is designed for operation in environments encountered in high performance aircraft and missiles.

THE A. W. HAYDON CO.
Culver City, Calif.